UNITED STATES PATENT AND TRADEMARK OFFICE

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10/553,390	10/17/2005	Ken Mashitani	070591-0038	9003

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/553,390	MASHITANI ET AL.
	Examiner	Art Unit
	FAN ZHANG	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *13 April 2011*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *4,6-9,14,15 and 21-27* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *4, 6-9, 14, 15, and 21-27* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a) ☐ All   b) ☐ Some * c) ☐ None of:
         1. ☐ Certified copies of the priority documents have been received.
         2. ☐ Certified copies of the priority documents have been received in Application No. _____.
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's remarks received on April 13, 2011 with respect to amended claims have been acknowledged but not found persuasive. Currently claims 4, 6-9, 14, 15, and 21-27 are rejected and claims 1-3, 5, 10-13, and 16-20 are cancelled.

With respect to claims 22-27, Applicant argues that none of the cited references teaches "order-of-priority information indicates an order-of-priority to be given to the selected two-dimensional images," and "the order-of-priority is determined by order of specifying the viewpoint-number information in the attached information." Examiner respectfully disagrees.

Imaizumi prescribes in p0001: "This invention relates to the compression encoding apparatus in the case of transmitting the…computer graphics as a multiaspect image (two-dimensional picture)." Imaizumi further teaches in p0008: "a picture corresponding to which viewpoint to be used as an image comparison among pictures corresponding to two or more of other viewpoints..." in p0011: "viewpoint ranking is defined as two or more three or more viewpoints at the time of observing a photographic subject...A position of a viewpoint of a picture corresponding to a viewpoint of a higher rank..." and in p0012: "ranking of a viewpoint is explained. Drawing 1 is a figure explaining this, (a) shows viewpoint (camera) arrangement and seven cameras from the camera A to G are photoing the same photographic subject in this example. In the figure, ranking (viewpoint ranking) during these viewpoints is defined, and, as for (b), the viewpoint D shows that a viewpoint of a higher rank and the viewpoint A, C, and E,

and G are the viewpoints of a higher rank after the next the top viewpoint and the

viewpoints B and F."

From the above order-of-priority for viewpoints of two-dimensional images is

defined in terms of ranking of viewpoints. And the order-of-priority is determined by

order of specifying the viewpoint-number information. For instance, the order of the

viewpoint-number information specified by A to G are listed from left to right as

illustrated in figs. 1 and 2 of Imaizumi, which is an obvious variation of the arrangement

illustrated in figs. 2 and 3 of Applicant's spec ((0, 0) through (7, 0) arranged from left to

right.). Then the order of priority is defined from the top viewpoint D to the very bottom

viewpoints A, C, E, and G as illustrated in fig. 1(b). Viewpoint D which is listed in the

middle of the viewpoints A to G arranged from left to right has the highest order of

priority in Imaizumi's teaching whereas viewpoint (3, 0) listed in the middle of the

viewpoints (0, 0) to (7, 0) arranged from left to right is also given the first order of priority

as described in p0033 of Applicant's spec. Although letters rather than numbers are

used for judging rankings of viewpoints for convenience in Imaizumi et al's teaching, the

actual viewpoints positions are represented by number coordinates as prescribed in

p0010. Therefore, given the above analysis, the claimed limitation would have been

obvious in view of the combined teaching of Takemoto et al and Imaizumi.

Response to Amendments

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 4, 6-9, 14, 15, and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemoto et al (US Pub: 2003/0048354) (Applicant submitted reference) and in further view of Imaizumi et al (JP Patent: 2000023198).

Regarding claim 22 (Currently Amended), Takemoto et al teach: A stereoscopic vision-use image providing method for providing two dimensional image data including a plurality of two-dimensional images of different viewpoints for use as stereoscopic vision-use images [p0135], the method comprising the steps of: providing, by a computer, the two-dimensional image data [p0041]; and attaching, by the computer, information to the two-dimensional image data [p0139, p0140], the attached information including: viewpoint-number information allotted to each two-dimensional image, or information for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for two-dimensional image areas corresponding to the respective two-dimensional images [abstract, p0135, p0182], selecting two or more of the two-dimensional images being made by specifying corresponding viewpoint-number information [p0135, p0175-p0179, p0182]; and display-manner information indicating in what manner the selected two-dimensional images are to be displayed [p0140-p0144, p0147 (Display-manner information is defined as in what style images are displayed, such as in two-dimension, three-dimension, or side-by-side.)].

Takemoto et al do not explicitly define order-of-priority information for each

viewpoint. In the same field of endeavor, Imaizumi et al teach: order-of-priority

information indicating an order-of-priority to be given to the selected two-dimensional

images, the order-of-priority being determined by order of specifying the viewpoint-

number information in the attached information; wherein the order-of-priority information

specifies order of the selected two or more two-dimensional images [p0001, p0008,

p0011, p0012 (images are selected according to the ranking of viewpoints in two-

dimension manner. Order of priority is provided after a display manner, either 2D or 3D,

is defined. Order-of-priority for viewpoints of two-dimensional images is defined in terms

of ranking of viewpoints. And the order-of-priority is determined by order of specifying

the viewpoint-number information. For instance, the order of the viewpoint-number

information specified by A to G are listed from left to right as illustrated in figs. 1 and 2 of

Imaizumi, which is an obvious variation of the arrangement illustrated in figs. 2 and 3 of

Applicant's spec ((0, 0) through (7, 0) arranged from left to right.). Then the order of

priority is defined from the top viewpoint D to the very bottom viewpoints A, C, E, and G

as illustrated in fig. 1(b). Viewpoint D which is listed in the middle of the viewpoints A to

G arranged from left to right has the highest order of priority in Imaizumi's teaching

whereas viewpoint (3, 0) listed in the middle of the viewpoints (0, 0) to (7, 0) arranged

from left to right is also given the first order of priority as described in p0033 of

Applicant's spec. Although letters rather than numbers are used for judging rankings of

viewpoints for convenience in Imaizumi et al's teaching, the actual viewpoints positions

are represented by number coordinates as prescribed in p0010.)]. Assigning

ranking/priority orders to viewpoints and selecting images corresponding to viewpoints

based on ranking have been well practiced in the art as prescribed by Imaizumi et al.

Therefore, it would have been obvious for an ordinary skilled in the art to modify the

teaching of Takemoto et al to assign ranking/priority orders to viewpoints and select the

corresponding images based on the ranking number information in the header for the

purpose of defining corresponding positional relationships among viewpoints and

properly organizing information for more efficient image/viewpoint identification and

selection.

Claim 23 (currently amended) has been analyzed and rejected with regard to

claim 22.

Regarding claim 24 (currently amended), the rejection and rationale applied to

claim 22 has been incorporated here. Takemoto et al further teach: and order of

alignment information specifying a direction of aligning the selected two dimensional

images [p0265, p0282-p0285 (Proper order and reverse order are considered as order

of alignment. Order of alignment is given to those viewpoint images which have display

manner (2D/3D) already defined.)].

Regarding claim 27 (currently amended), Takemoto et al teach: A

stereoscopic image display apparatus for creating stereoscopic vision- use images

based on two-dimensional image data including a plurality of two-dimensional images of

different viewpoints [p0135], comprising:

means for obtaining, from information attached to the two-dimensional image

data [p0139, p0140], viewpoint-number information of each two-dimensional image

[abstract, p0135, p0182], selecting two-dimensional image being made by specifying

corresponding viewpoint-number information [p0175-p0179], purpose-of-use information

indicating for what purposes the selected two-dimensional images are to be used

[p0141-p0147 (Whether an image is used as 2D, 3D; or whether it is used for

stereovision would be considered as purpose of use.)]; and order of alignment

information specifying a direction of aligning the selected two-dimensional images

[p0265, p0282-p0285 (Proper order and reverse order are considered as order of

alignment.)].

Takemoto et al do not explicitly define order-of-priority information for each

viewpoint. In the same field of endeavor, Imaizumi et al teach: means for selecting the

specified two-dimensional images according to an order-of-priority to be given to the

selected two-dimensional images, the order-of-priority being determined by order of

specifying the viewpoint-number information in the attached information [p0001, p0008,

p0011, p0012 (Order-of-priority for viewpoints of two-dimensional images is defined in

terms of ranking of viewpoints. And the order-of-priority is determined by order of

specifying the viewpoint-number information. For instance, the order of the viewpoint-

number information specified by A to G are listed from left to right as illustrated in figs. 1

and 2 of Imaizumi, which is an obvious variation of the arrangement illustrated in figs. 2

and 3 of Applicant's spec ((0, 0) through (7, 0) arranged from left to right.). Then the

order of priority is defined from the top viewpoint D to the very bottom viewpoints A, C,

E, and G as illustrated in fig. 1(b). Viewpoint D which is listed in the middle of the

viewpoints A to G arranged from left to right has the highest order of priority in

Imaizumi's teaching whereas viewpoint (3, 0) listed in the middle of the viewpoints (0, 0)

to (7, 0) arranged from left to right is also given the first order of priority as described in

p0033 of Applicant's spec. Although letters rather than numbers are used for judging

rankings of viewpoints for convenience in Imaizumi et al's teaching, the actual

viewpoints positions are represented by number coordinates as prescribed in p0010.)].

Assigning ranking/priority orders to viewpoints and selecting images

corresponding to viewpoints based on ranking have been well practiced in the art as

prescribed by Imaizumi et al. Therefore, it would have been obvious for an ordinary

skilled in the art to modify the teaching of Takemoto et al to assign ranking/priority

orders to viewpoints and select the corresponding images based on the ranking number

information in the header for the purpose of defining corresponding positional

relationships among viewpoints and properly organizing information for more efficient

image/viewpoint identification and selection.

Claim 26 (currently amended) has been analyzed and rejected with regard to

claim 27 and in accordance with Takemoto et al's further teaching on: means for

obtaining purpose-of-use information indicating for what purposes the two-dimensional

image data selected by the information for selecting is to be used; and the order-of-

priority information specifies order of the two or more two-dimensional image data

selected based on the purpose-of-use information [p0141-p0147 (Whether an image is

used as 2D, 3D; or whether it is used for stereovision would be considered as purpose

of use. Imaizumi et al teach specifying and selecting the order of priority/ranking of

each image/viewpoint as specified in claim 25. Since the ranking process takes place

after 2D images are defined/obtained, given Takemoto et al's teaching on defining the

purpose of use of images at the very beginning, the later occurred ranking is obviously

based on predefined 2D images.)].

Claim 25 (currently amended) has been analyzed and rejected with regard to

claims 22 and 26.

Regarding claim 4 (previously presented), the rationale applied to the

rejection of claims 22 or 23 has been incorporated herein. Takemoto et al further teach:

A stereoscopic vision-use image providing method according to claim 22 or 23, wherein

the attached information further includes information for indicating whether or not the

plurality of two-dimensional images are an endless series of two-dimensional images in

which any two adjacent viewpoints, including the images at each end of the series, are

continuous [figs. 35a, 35b (For images in those endless series the first and the last

images always exist no matter how shifting is performed.); p0265, p0265 figs. 34a, 34b

(The images are shifted in those limited (non-endless) series so that the first and last

images from before shifting are eliminated after shifting.)]. Although Takemoto et al do

not specifically include in an attached header the information indicating whether a series

of images are endless, Takemoto et al prescribe and illustrate various consequences on

images in a series from being shifted based on the information. Therefore, it would

have been obvious for an ordinary skilled in the art to modify Takemoto et al's teaching

to add an indication in a header regarding available information on whether a series of

images are endless for the purpose of image status indication per user preference.

Regarding claim 6 (currently amended), the rationale applied to the rejection

of claims 22 or 23 has been incorporated herein. Takemoto et al further teach: A

stereoscopic vision-use image providing method according to claim 22 or 23, wherein

the attached information further includes purpose-of-use information indicating for what

purposes the selected two-dimensional images is to be used [p0140-p0146 (Purpose of

use of an image is indicated as whether or not the image is for stereovision.)].

Regarding claim 7 (previously presented), the rejection applied to claim 6 has

been incorporated herein. Although Takemoto et al do not use "0" and "1" to indicate

validity/invalidity of purpose of use, Takemoto et al apply "0" and "1" for indicating

validity/invalidity of other information such as boundary process existing or not and

same arrangement of camera or not as prescribed in [p0148-p0150, p0167-p0169].

Therefore, it would have been obvious for an ordinary skilled in the art to apply "0" and

"1" to DIM region to indicate whether or not the image is for stereovision for the purpose

of presenting clear and obvious indication per user preference.

Regarding claim 8 (previously presented), the rationale applied to the

rejection of claims 22 or 23 has been incorporated herein. Takemoto et al further teach:

A stereoscopic vision-use image providing method according to claim 22 or 23, wherein

the attached information further includes information indicating what description formats

are adopted as a description format of the information [p0029, p0139 (The

predetermined prescribed coding format is considered as a description format.)].

Regarding claim 9 (previously presented), the rationale applied to the

rejection of claims 22 or 23 has been incorporated herein. Takemoto et al further teach:

A stereoscopic vision-use image providing method according to claim 22 or 23, wherein

the attached information is provided by any one of broadcasting, communicating, or

recording into a recording medium [abstract].

Regarding claim 14 (currently amended), the rationale applied to the rejection

of claims 24 or 25 has been incorporated herein. Takemoto et al further teach: A

stereoscopic image display apparatus according to claim 24 or 25, wherein the process

which is not a primary stereoscopic vision-use image process is a process for displaying

on a screen one or a plurality of the two-dimensional images by applying thereto a

reduction-in-size process in order to show contents of the plurality of the two-

dimensional images of different viewpoints [p0053, p0133].

Regarding claim 15 (currently amended), the rationale applied to the rejection

of claims 24 or 25 has been incorporated herein. Takemoto et al further teach: A

stereoscopic image display apparatus according to claim 24 or 25, wherein the process

is a process for selecting, out of the plurality of two-dimensional images of different

viewpoints [p0044, p0193], one or a plurality of the two-dimensional images for use of at

least one of a print-out and an image delivery [p0045, p0132 (Transmission of an image

is considered as image delivery.)].

Regarding claim 21 (previously presented), the rationale applied to the

rejection of claims 24 or 25 has been incorporated herein. Takemoto et al further teach:

A stereoscopic image display apparatus according to claim 24 or 25, comprising a

means for obtaining, from the attached information, information indicating what

description formats as a description format of the information is adopted, wherein, in a

case of being capable of obtaining the information, a content of the attached information

is recognized based on the description format indicated in the information [p0140-

p0147, p0189-p0191].

Conclusion

4.   Applicant's amendments have necessitated new grounds of rejection in this

Office Action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Fan Zhang whose telephone number is (571) 270-3751.

The examiner can normally be reached on Mon-Fri from 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Benny Q. Tieu can be reached on (571) 272-7490. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/Benny Q Tieu/   /Fan Zhang/

Supervisory Patent Examiner, Art Unit 2625   Patent Examiner